

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	09/496,188	CUSHING, DAVID
	Examiner	Art Unit
	Alain L. Bashore	1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 9-29-06.
2.  The allowed claim(s) is/are 3,4,7-10,17 and 19.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some\* c)  None of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

  
**ALAIN L. BASHORE**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed 9-29-06 with respect to rejection of record have been fully considered and are persuasive. The finality of the previous office action has been withdrawn. The after-final amendment filed 9-29-06 has been entered.

### ***Allowable Subject Matter***

2. Claims 3-4, 7-10, 17, and 19 are allowed. The drawings filed 3-8-01 are acceptable.

3. The following is an examiner's statement of reasons for allowance: The present invention includes independent claims 3, 4, 7, 8, 9, 17, and 19. Claims 3-4, 7-9 all recite a computer implemented method for identifying a price at which to conduct a batch auction of a financial security, claims 17 and 19 recite a computerized apparatus for identifying a price at which to conduct a batch auction of a security.

Fraser et al is considered the closest prior art. Fraser discloses a computer-implemented method for identifying a price at which to conduct a batch auction of a financial security. A plurality of order requests (priced) from a plurality of sources is accepted within certain order parameters and a single price is determined which to

trade (col 1, lines 45-67; col 2, lines 1-31). Since the method to Fraser et al utilizes events and rules, there is present a algorithm.

Fraser does not disclose the combination including:

In claim 3:

selecting the price at which to trade the security, including

    determining whether there exists at least one order on each side of a trade containing a price as an order parameter such that at least one purchase price is higher than or equal to at least one selling price, and if so determining from said priced portion of said orders whether there exists a single price at which a maximum number of shares of said security will be traded, and, if so, selecting said single price as a selected price,

    if there does not exist such a single price, calculating an imbalance ratio of purchase requests of said security to sale requests of said security, and determining the selected price based on the result of a comparison of said imbalance ratio to a predetermined reference value,

    if no orders on opposite sides of a trade contain intersecting prices, then selecting a predetermined reference price as said selected price; and exchanging a number of shares of the security at the selected price;

wherein said number of shares is a maximum number of shares which can be exchanged based upon said order requests;

wherein said maximum number of shares is a factor for selecting the selected price.

In claim 4:

selecting the price at which to trade the security, including

determining whether there exists at least one order on each side of a trade containing a price as an order parameter such that at least one purchase price is higher than or equal to at least one selling price, and if so determining from said priced portion of said orders whether there exists a single price at which a maximum number of shares of said security will be traded, and, if so, selecting said single price as a selected price,

if there does not exist such a single price, calculating an imbalance ratio of purchase requests of said security to sale requests of said security, and determining the selected price based on the result of a comparison of said imbalance ratio to a predetermined reference value,

if no orders on opposite sides of a trade contain intersecting prices, then selecting a predetermined reference price as said selected price; and

exchanging a number of shares of the security at the selected price;  
wherein the selected price lies within a range identified by a bid-offer spread of  
the asset on a market for the asset.

In claim 7:

selecting the price at which to trade the security, including  
determining whether there exists at least one order on each side of  
a trade containing a price as an order parameter such that at least one purchase  
price is higher than or equal to at least one selling price, and if so determining from  
said priced portion of said orders whether there exists a single price at which a  
maximum number of shares of said security will be traded, and, if so, selecting said  
single price as a selected price,

if there does not exist such a single price, calculating an imbalance  
ratio of purchase requests of said security to sale requests of said security, and  
determining the selected price based on the result of a comparison of said imbalance  
ratio to a predetermined reference value,

if no orders on opposite sides of a trade contain intersecting  
prices, then selecting a predetermined reference price as said selected price; and  
exchanging a number of shares of the security at the selected price;

wherein said orders have order types selected from the group consisting of unpriced orders, cross orders, and priced orders; and,

wherein said cross orders comprise order parameters including a security identifier and a quantity of shares for both a purchase order request and a sell order request.

In claim 8:

selecting the price at which to trade the security, including  
determining whether there exists at least one order on each side of  
a trade containing a price as an order parameter such that at least one purchase  
price is higher than or equal to at least one selling price, and if so determining from  
said priced portion of said orders whether there exists a single price at which a  
maximum number of shares of said security will be traded, and, if so, selecting said  
single price as a selected price,

if there does not exist such a single price, calculating an imbalance  
ratio of purchase requests of said security to sale requests of said security, and  
determining the selected price based on the result of a comparison of said imbalance  
ratio to a predetermined reference value,

if no orders on opposite sides of a trade contain intersecting prices, then selecting a predetermined reference price as said selected price; and exchanging a number of shares of the security at the selected price; allocating said exchange shares pro-rata among said orders whose parameters are met by said selected price.

In claim 9:

selecting the price at which to trade the security, including determining whether there exists at least one order on each side of a trade containing a price as an order parameter such that at least one purchase price is higher than or equal to at least one selling price, and if so determining from said priced portion of said orders whether there exists a single price at which a maximum number of shares of said security will be traded, and, if so, selecting said single price as a selected price,

if there does not exist such a single price, calculating an imbalance ratio of purchase requests of said security to sale requests of said security, and determining the selected price based on the result of a comparison of said imbalance ratio to a predetermined reference value,

if no orders on opposite sides of a trade contain intersecting prices, then selecting a predetermined reference price as said selected price; and exchanging a number of shares of the security at the selected price; wherein said selected step is performed according to an algorithm selected from the group consisting of a price discovery algorithm and a reference price algorithm.

In claim 17:

A computerized network having at least two computers in electronic communication with each other; an order receiving program running on one or more of said computers, wherein said receiving program is designed to receive a plurality of messages containing orders from one or more qualified participants; an order book database located on one or more of said computers, wherein said order book database communicates with said order receiving program and stores each of said orders received by said receiving program; a price selection program running on one or more of said computers, wherein said price selection program refers to said order book database and

calculates a single selected price at which to transact a maximum number of shares of the security during the batch auction, said single selected price being determined differently according to whether or not intersecting orders exist in said order book database;

    a batch auction execution program running on one or more of said computers, wherein said execution program executes the batch auction of said maximum number of shares of the security at a given execution time at said selected wherein said batch auction execution program allocates said maximum number of shares among accepted orders according to a pro-rata distribution of said maximum number of said shares among said orders having a price requirement at least as aggressive as said single price.

In claim 19:

    A computerized network having at least two computers in electronic communication with each other;  
    an order receiving program running on one or more of said computers, wherein said receiving program is designed to receive a plurality of messages containing orders from one or more qualified participants;

an order book database located on one or more of said computers,  
wherein said order book database communicates with said order receiving program  
and stores each of said orders received by said receiving program;

a price selection program running on one or more of said computers,  
wherein said price selection program refers to said order book database and  
calculates a single selected price at which to transact a maximum number of shares  
of the security during the batch auction, said single selected price being determined  
differently according to whether or not intersecting orders exist in said order book  
database;

a batch auction execution program running on one or more of said  
computers, wherein said execution program executes the batch auction of said  
maximum number of shares of the security at a given execution time at said selected  
price;

wherein said single price is constrained to lie within the bounds identified by a  
bid-offer spread of the security on a market for the security.

For these reasons claims 3, 4, 7, 8, 9, 17, and 19 are deemed to be allowable over the prior art of record, and claim 10 is allowable by dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alain L. Bashore whose telephone number is 571-272-6739. The examiner can normally be reached on about 7:30 am to 5:00 pm (Mon. thru Thurs.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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